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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/559,095
Filing Date: December 01, 2005
Appellant(s): HOFMANN, MARIANNE

James Durlacher
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/27/10 appealing from the Office action mailed 05/25/10.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 22, 25-28 and 31-40 are pending and rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

US 4,174,710	Pampuch	11-1979
GB 2,078,491	Wood	01-1982

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 22, 27, 28, 32, 35, 37, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Pampuch (US 4,174,710).

Pampuch teaches the following:

22. A hood, in particular for a clothing item for protective and military purposes, such as an NBC protective suit, said hood (4) comprising: a hood body (4) having a

peripheral edge defining a face opening (see figure), said face opening being constructed and arranged for receiving a respirator (1); a peripheral elastic hem (5) attached to said peripheral edge (see figure 1: identifiers 4 and 5), said peripheral elastic hem being constructed and arranged to extend around said face opening (see figure, identifier 5), said peripheral elastic hem (5) having an inner face and an outer face (see figure); and a plurality of peripheral sealing elements conjoined to the inner face of said peripheral elastic hem (see column 2, lines 12-16), said plurality of peripheral sealing elements comprised of elastofibers and being constructed (inherent due to elastic material construction), and arranged for abutment against and around the respirator received by said face opening (see figure and column 2 lines 12-16),_wherein the individual sealing elements are in substantially parallel arrangement with each other (column 2, lines 12-16). Further, Pampuch teaches wherein the sealing elements abut the respirator linearly (column 2, lines 12-16: see figure 1) and the sealing elements project or protrude from the hem (column 2, lines 12-16). Further, Pampuch teaches the sealing elements being constructed and arranged for closeout abutment against the respirator (see column 1, lines 67-68 through column 2, liens 1-11).

27. The hood according to claim 22, wherein the sealing elements are each configured as one of the forms selected from the group consisting of a sealing ring, as a sealing lip or as a sealing protrusion (column 2, lines 12-16).

28. The hood according to claim 22, wherein the sealing elements are constructed and arranged as one of the structures selected from the group consisting of thread-shaped, ligament-shaped, string-shaped or strip- shaped or

webbed-shaped or honeycomb-shaped (figure 1 ; column 2, lines 12-16).

32. The hood according to claim 22, wherein the elasticity of the sealing elements would inherently corresponds at least essentially to the elasticity of the hem (column 2, lines 12-16).

35. The hood according to claim 22, wherein the hood including the face opening comprises, on the side portion of face opening, a fastener (see figure).

37. A clothing item, in particular for protective and/or military purposes, such as an NBC protective suit (4) or the like, comprising a hood as defined in claim 22 (4).

39. A clothing item, in particular for protective and military purposes, such as an NBC protective suit or the like, said clothing item comprising: a clothing body (4) defining at least one opening for a body part, such as a hand, arm, foot, leg or head (see figure); having a peripheral elastic hem (5) attached to said clothing body (column 1, lines 58- 62), said peripheral elastic hem (5) being constructed and arranged to extend around said opening (figure 1), the opening being provided for receiving a further clothing item or an equipment article (see figure 1; identifier 4 and 1), said peripheral elastic hem (5) having an inner face and an outer face and a plurality of peripheral sealing elements which are conjoined with the to the inner face of said peripheral elastic hem said plurality of peripheral sealing elements comprised of elastofibers (inherently, due to elastic material construction) and being constructed and arranged for abutment against and around the further clothing item or equipment article,

wherein the individual sealing elements are in substantially parallel arrangement with each other (column 2, lines 12-16). Further, Pampuch teaches wherein the sealing elements abut the respirator linearly (column 2, lines 12-16: see figure 1) and the sealing elements project or protrude from the hem (column 2, lines 12-16). Further, Pampuch teaches the sealing elements being constructed and arranged for closeout abutment against the respirator (see column 1, lines 67-68 through column 2, liens 1-11).

40. A method for closing out the transition between a portion of a clothing item (4) on the one hand and a further clothing item or equipment article (1) on the other hand by using an elastic hem (5), comprising the steps of: providing an elastic hem (5) having an inner face and an outer face; an joining said elastic hem to said clothing item (column 1, lines 58-62) wherein said elastic hem (5)_faces the further clothing item or the equipment article; providing a plurality of sealing elements in the form of elastofibers (inherently, due to elastic material); and conjoining said plurality of sealing elements with the inner face of said hem for closeout abutment of the further clothing item or equipment article (see figure 1: column 2, lines 12-16).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described

> as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 25, 26, 31,33 and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Pampuch (US 4,174,710).

Pampuch teaches a garment as described above in claims 21 and 24. However, Pampuch fails to specifically teach the dimension the sealing elements project from the hem, the method of attaching the sealing elements to the hem, the sealing elements thickness in comparison to the hem, the extensibility of the sealing elements and the modulus of elasticity in stretching of the sealing elements.

In regard to claim 25, with respect to the sealing elements projecting or protruding from the hem by not less than 0.25 mm, preferably not less than 0.4 mm. With respect to the sealing elements projecting from the hem by .4mm and .25mm. The specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom, and that as such the dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular dimensions or another variable in the claim, the Appellant must show that the .25mm-.4mm protrusion of the sealing element from the hem is critical. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990).*

One having ordinary skill in the art would be able to determine through routine experimentation the ideal dimension for a particular application.

In regard to claim 26, with respect to the sealing elements being secured to the hem by using one of the securing methodologies selected from the group consisting of stitching, interweaving, adhering, stapling and welding. The specification contain no disclosure or either the critical nature of the claimed attaching methods or any unexpected results arising therefrom, and that as such the attaching methods are arbitrary and therefore obvious.

One having ordinary skill in the art would be able to determine through routine experimentation the desired attaching method from many known attaching methods in the apparel arts including stitching, interweaving, adhering, stapling and welding.

In regard to claim 31, with respect to the cross-sectional thickness of the sealing elements being not less than 1/4 of the cross-sectional thickness of the hem. The specification contains no disclosure of either the critical nature of the claimed dimensions of any unexpected results arising therefrom, and that as such the dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular dimensions or another variable in the claim, the Appellant must show that the thickness of the sealing element being not less than 1/4 of the cross-sectional thickness of the hem is critical. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990).*

One having ordinary skill in the art would be able to determine through routine experimentation the ideal thickness for the sealing element so that a good seal is achieved between the garment and the respirator.

In regard to claim 33, with respect to the sealing elements having a

relative elastic extensibility, based on their original length, of not less than 30 %. The specification contains no disclosure of either the critical nature of the claimed extensibility dimensions of any unexpected results arising therefrom, and that as such the extensibility dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular extensibility dimensions or another variable in the claim, the Appellant must show that the sealing elements having elastic extensibility of not less then 30%. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990).*

One having ordinary skill in the art would be able to determine through routine experimentation the ideal extensibility for a particular application.

In regard to claim 34, with respect to the material of which the sealing elements consist has, at 25 °C, a modulus of elasticity in stretching in the range of from 5.105 N.m2 to 9.10 6 N.m2.

The specification contains no disclosure of either the critical nature of the claimed extensibility dimensions of any unexpected results arising therefrom, and that as such the extensibility dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular extensibility dimensions or another variable in the claim, the Appellant must show that the sealing elements are made from a material
that has a modulus of elasticity from 5.105Nm2 to 9.10 6 N.m2. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990).*

One having ordinary skill in the art would be able to determine through routine

experimentation the ideal modulus of elasticity for the sealing elements to create a good sealing effect.

5. Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pampuch in view of Wood (GB 2,078,491).

Pampuch teaches a protective suit used with a respirator mask. However, Pampuch fails to teach the hood having a liner.

In regard to claim 36, Wood teaches a protective garment with a hood, the hood (1) includes a liner (7) on its inside surface with an inside material, the inside material comprising a material selected from the group consisting of: (i) an adsorption-capable material on the basis of activated carbon, and (ii) a water-vapor-pervious, but gas-impervious barrier layer preventing or retarding the passage of harmful gases and liquids (page 1, lines 58-65).

In regard to claim 38, Wood teaches the clothing item includes a liner (7) on its inside surface with an inside material, the inside material comprising a material selected from the group consisting of: (i) an adsorption- capable material on the basis of activated carbon, and (ii) a water-vapor-pervious, but gas-impervious barrier layer preventing or retarding the passage of harmful gases and liquids (page 1, lines 58-65).

It would have been obvious to have provided the protective suit with respirator seal of Pampuch with the protective suit liner of Woods, since the protective suit of Pampuch provided with a liner, would provide even further protection to the user from the hazardous elements.

(10) Response to Argument

I-A) Appellant argues that Pampuch fails to teach the laterally spaced ribs being sealing elements.

Examiner disagrees, since Pampuch teaches the elastic band element (5) is provided with laterally spaced ribs surrounding the inside surface, which would create a plurality of peripheral sealing elements (see column 2, lines 12-15). Laterally spaced ribs attached to an elastic band is illustrated and discussed by Pampuch to represent the ribs (7) on band (6). The disclosure of Pampuch teaches the use of ribs on the inside surface of the elastic band element (5) of the hood garment. These specific ribs are not illustrated in the figures, but that does not mean that that Pampuch does not teach this limitation. The specification, claims and drawings are all elements of an invention that can be used to reject limitations of claims in patent applications. Therefore, Pampuch teaches the use of ribs on the inside of the elastic band (see column 2, lines 12-15). In addition, Pampuch teaches the elastic band element (5) having an additional sealing element at the end of the elastic band (5a: thickened end) and another sealing element next to the end of the elastic band (5c: groove). These two sealing elements (5a, 5c) can be interpreted as the plurality of peripheral elements (see figures).

The ribs of Pampuch extending along the inner surface of the elastic band (5) interact with ribs (2, 2a) on the mask to seal the mask to the hood garment (see column 1, lines 67-68 through column 2, lines 1-27), both sets of ribs are sealing elements that

interact with one another to form a gas-tight joint (column 1, lines 29-32 and column 2, lines 16-18), which would be a tightly sealed connection.

I-B) Appellant argues that Pampuch fails to teach the peripheral sealing elements conjoined to the inner face of the peripheral elastic hem.

Examiner disagrees, since the term "conjoined" is an adjective that means, joined together, united or linked. The sealing elements (2, 2a) on elastic band (5) of Pampuch are conjoined, since they are joined together, united, or linked (column 2, lines 12-15). Even if the elastic band with ribs is a molded structure, it still teaches the ribs and elastic band conjoined, joined together, united or linked.

II-III) Appellant argues that Pampuch fails to teach the peripheral sealing elements comprised of elastofibers.

Pampuch teaches an elastic band (5) with ribs (2, 2a). In Appellant's Specification on page 8, lines 12-23, Appellant discloses that the sealing elements are made of elastic, which would include the elastic band of Pampuch.

> "The material of which **the sealing element 6 which is provided according to the present invention consists may be for example any kind of gum, latex, elastic** plastic, etc., as long as it is suitable for use in the realm of the present invention. In particular, these materials should advantageously have a certain thermal and UV stability and also, what is more, a certain resistance to aggressive media, in particular warfare agents, but also to body fluids, in particular sweat. It is also of advantage for the material to be water repellent."

It is noted that the Appellant can be their own lexicographer, so the definition of the term elastofibres is taken from Appellant's Specification to be defined as follows (below taken from pages 8-9 of Appellant's Specification):

> "Examples of materials suitable according to the present invention are for example certain kinds of so-called elastofibers (see ROMPP-Chemielexikon, 10th edition, volume 2, 1997, pages 1104 to 1106, headword "Elasto- fasern", Georg Thieme Verlag Stuttgart/New York); 30 elastofibers are manufactured fibers which are extremely extensible and, after the tensile force has been removed, substantially return into the original state. The most important representatives are elastane, fibers composed of high polymers which consist to at 35 least 85% by weight of segmented polyurethane, and elastodiene, fibers which consist of synthetic polyiso-prene or of high polymers formed by polymerization of one or more dienes with or without one or more vinyl monomers. The second group may also be considered as including the elastomeric fibers formed from natural rubber. Elastodienes are frequently vulcanized. Elastic properties are also possessed by a bicomponent fiber consisting of polyamide and polyurethane. See the aforementioned literature reference for further de\- tails. The dimensions of such fibers must be approximately adapted for the purposes of the present invention. Such fibers can be incorporated with the hem material for example."

The ealstofibers as defined by Appellant are manufactured fibers which are extremely extensible and after the tensile force has been removed, substantially return to their original state. An example includes the elastomeric fibers formed from natural rubber. Elastic is an elastomeric formed from natural rubber. Therefore, Pampuch teaches the sealing elements formed of ealstofibers.

IV) Appellant argues that Pampuch fails to teach a "substantially parallel arrangement" between the laterally spaced ribs.

Pampuch clearly teaches in column 1, lines 47-50, that ribs 2a and retainer 3 are parallel, if this is the case, then ribs 2 and 2a are parallel to each other, since they have the same orientation as ribs 2a and retainer 3 (see figures).

Further, Examiner notes that the term "substantially parallel" is broader than "parallel". Therefore, "substantially parallel" is considered as mostly parallel and not fully parallel.

V) Appellant argues that Pampuch fails to teach the limitation of claim 26, detailing that the sealing elements are joined to the hem by stitching, interweaving, adhering, stapling and welding.

In regard to claim 26, with respect to the sealing elements being secured to the hem by using one of the securing methodologies selected from the group consisting of stitching, interweaving, adhering, stapling and welding. The specification contains no disclosure or the critical nature of the claimed attaching methods or any unexpected results arising therefrom, and that as such the attaching methods are arbitrary and therefore obvious.

The elastic hem of Pampuch is identifier 5 which is attached to protective suit 4. The attachment between the elastic hem and protective suit would have to be accomplished by some known attaching method.

One having ordinary skill in the art would be able to determine through routine experimentation the desired attaching method from many known attaching methods in the apparel arts including stitching, interweaving, adhering, stapling, molding and welding.

VI) Appellant argues that Pampuch fails to teach the limitation of claim 33, detailing the sealing elements having a relative extensibility of not less than 30 %.

In regard to claim 33, with respect to the sealing elements having a relative extensibility of not less than 30 %. One having ordinary skill in the art would be able to determine through routine experimentation the ideal modulus of elasticity for the sealing elements to create a good sealing effect, based on their original length, of not less than 30 %. The specification contains no disclosure of either the critical nature of the claimed

extensibility dimensions of any unexpected results arising therefrom, and that as such the extensibility dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular extensibility dimensions or another variable in the claim, the Appellant must show that the sealing elements having elastic extensibility of not less then 30%. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990).*

One having ordinary skill in the art would be able to determine through routine experimentation the ideal extensibility for a particular application.

VII) Appellant argues that Pampuch fails to teach the limitation of claim 34, detailing the sealing elements having a modulus of elasticity in stretching in a specified range.

In regard to claim 34, with respect to the material of which the sealing elements consist has, at 25 °C, a modulus of elasticity in stretching in the range of from 5.105 N.m2 to 9.10 6 N.m2.

The specification contains no disclosure of either the critical nature of the claimed extensibility dimensions of any unexpected results arising therefrom, and that as such the extensibility dimensions are arbitrary and therefore obvious. Such unsupported cannot be a basis for patentability, since where patentability is said to be based upon the particular extensibility dimensions or another variable in the claim, the Appellant must show that the sealing elements are made from a material

that has a modulus of elasticity from 5.105Nm2 to 9.10 6 N.m2. *In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir.1990).*

One having ordinary skill in the art would be able to determine through routine experimentation the ideal modulus of elasticity for the sealing elements to create a good sealing effect.

VIII) Appellant argues that Pampuch in view of Wood fails to teach the liner of claims 36 and 38.

Examiner disagrees, since Wood teaches a protective garment with a hood, the hood (1) includes a liner (7) on its inside surface with an inside material, the inside material comprising a material selected from the group consisting of: (i) an adsorption-capable material on the basis of activated carbon, and (ii) a water-vapor-pervious, but gas- impervious barrier layer preventing or retarding the passage of harmful gases and liquids (page 1, lines 58-65).

IX) Appellant argues that there is no motivation to combine Pampuch (US 4,174,710) with Woods (GB 2 078 491).

In KSR, the Supreme Court indicated that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it,

either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." KSR Int'l v. Teleflex Inc., 127 S. Ct. 1727, 1740 (2007).

Here, where Pampuch teaches a protective suit with a head covering portion (4). The head covering (4) is connected to a face mask 1. Wood et al. (GB 2 078 491) teaches protective garment with a head covering portion (1). The head covering portions has an opening for connection to a mask. Additionally, Wood et al. teaches the head covering portion having a liner.

It would have been obvious to have provided the protective suit with respirator seal of Pampuch with the protective suit liner of Woods, since the protective suit of Pampuch provided with a liner, would provide even further protection to the user from the hazardous elements.

IV) Appellant argues that patents have been grated in other countries on the same claims prosecuted in this application.

This augment is moot, since the claims pending before the U.S. Patent Office do not overcome the prior art to Pampuch and Wood.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Alissa L. Hoey/

Primary Examiner, Art Unit 3765

Conferees:

/GARY L. WELCH/

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